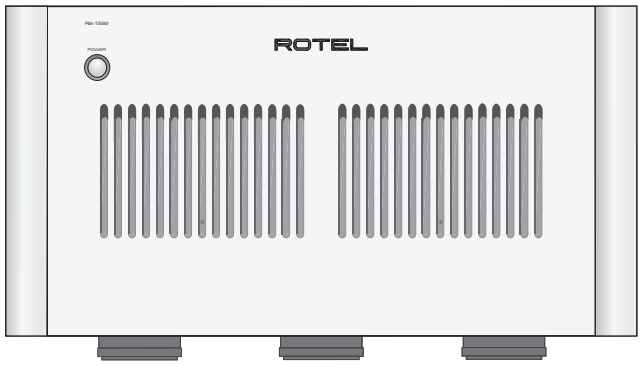
ROTEL®



RB-1592

Stereo Power Amplifier

Owner's Manual

Register your product at
www.Rotel.com/register

Important Safety Instructions

WARNING: There are no user serviceable parts inside. Refer all servicing to qualified service personnel.

WARNING: To reduce the risk of fire or electric shock, do not expose the unit to moisture or water. Do not expose the unit to dripping or splashing. Do not place objects filled with liquids, such as vases, on the unit. Do not allow foreign objects to get into the enclosure. If the unit is exposed to moisture, or a foreign object gets into the enclosure, immediately disconnect the power cord from the wall. Take the unit to a qualified service person for inspection and necessary repairs.

Read all the instructions before connecting or operating the component.

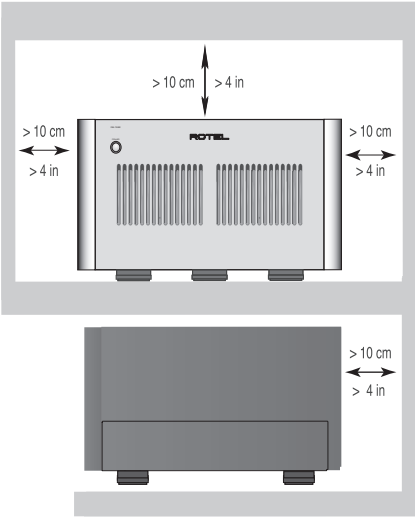
Keep this manual so you can refer to these safety instructions.

Heed all warnings and safety information in these instructions and on the product itself. Follow all operating instructions.

Clean the enclosure only with a dry cloth or a vacuum cleaner.

Do not use this unit near water.

You must allow a minimum 10 cm or 4 inches of unobstructed clearance around the unit.



Do not place the unit on a bed, sofa, rug, or similar surface that could block the ventilation openings. If the unit is placed in a bookcase or cabinet, there must be ventilation of the cabinet to allow proper cooling.

Keep the component away from radiators, heat registers, stoves, or any other appliance that produces heat.

WARNING: The rear panel power cord connector is the mains power disconnect device. The apparatus must be located in an open area that allows access to the cord connector.

The unit must be connected to a power supply only of the type and voltage specified on the rear panel. (USA: 120 V/60Hz, EC: 230V/50Hz)

Connect the component to the power outlet only with the supplied power supply cable or an exact equivalent. Do not modify the supplied cable. A polarized plug has two blades, with one wider than the other. A grounding plug has two blades plus a third grounding prong. These are provided for your safety. Do not defeat grounding and/or polarization safety provisions. If the supplied plug does not fit your outlet, please consult an electrician for replacement of the obsolete outlet. Do not use extension cords.

The main plug of the power cordset is a disconnect device of the apparatus. In order to completely disconnect the apparatus from the supply mains, the main plug of the power cordset should be unplugged from the mains (AC) outlet. The stand-by LED indicator will not be lit up to show the power cord is unplugged. The disconnect device shall remain readily operable.

Do not route the power cord where it will be crushed, pinched, bent, exposed to heat, or damaged in any way. Pay particular attention to the power cord at the plug and where the cord exits the back of the unit.

The power cord should be unplugged from the wall outlet during a lightning storm or if the unit is to be left unused for a long period of time.

This apparatus shall be connected to a main socket outlet with a protective earth connection.

Use only accessories specified by the manufacturer.

Use only with a cart, stand, rack, bracket or shelf system recommended by Rotel. Use caution when moving the unit in a stand or rack to avoid injury from a tip-over.

Use Class 2 wiring for speaker connections to ensure proper insulation and minimize the risk of electric shock.

Immediately stop using the component and have it inspected and/or serviced by a qualified service agency if:

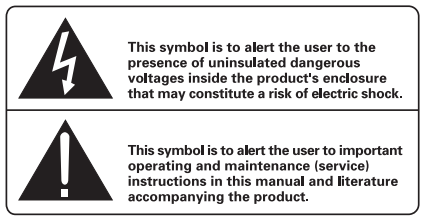
- The power supply cord or plug has been damaged
- Objects have fallen or liquid has been spilled into the unit
- The unit has been exposed to rain
- The unit shows signs of improper operation
- The unit has been dropped or damaged in any way

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS INSIDE REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

APPLICABLE FOR USA, CANADA OR WHERE APPROVED FOR THE USAGE

CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT. INSERT FULLY.

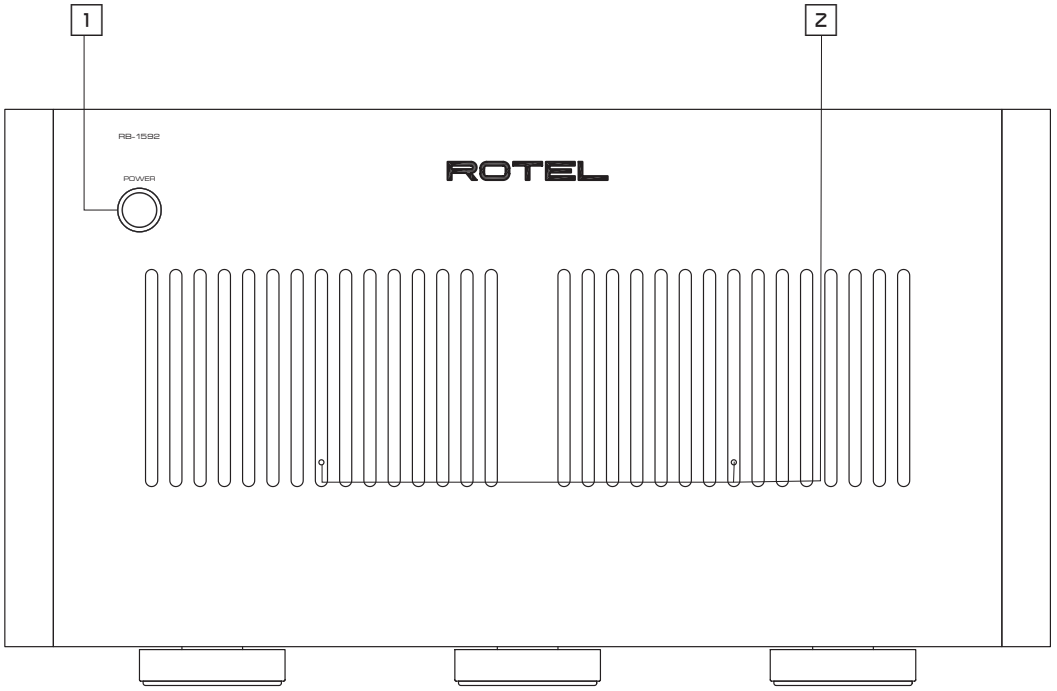
ATTENTION: POUR EVITER LES CHOCS ELECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU AU FOND.


This symbol is to alert the user to the presence of uninsulated dangerous voltages inside the product's enclosure that may constitute a risk of electric shock.
This symbol is to alert the user to important operating and maintenance (service) instructions in this manual and literature accompanying the product.

Rotel products are designed to comply with international directives on the Restriction of Hazardous Substances (RoHS) in electrical and electronic equipment and the disposal of Waste Electrical and Electronic Equipment (WEEE). The crossed wheelie bin symbol indicates compliance and that the products must be appropriately recycled or processed in accordance with these directives.

CE

Figure 1: Controls and Connections



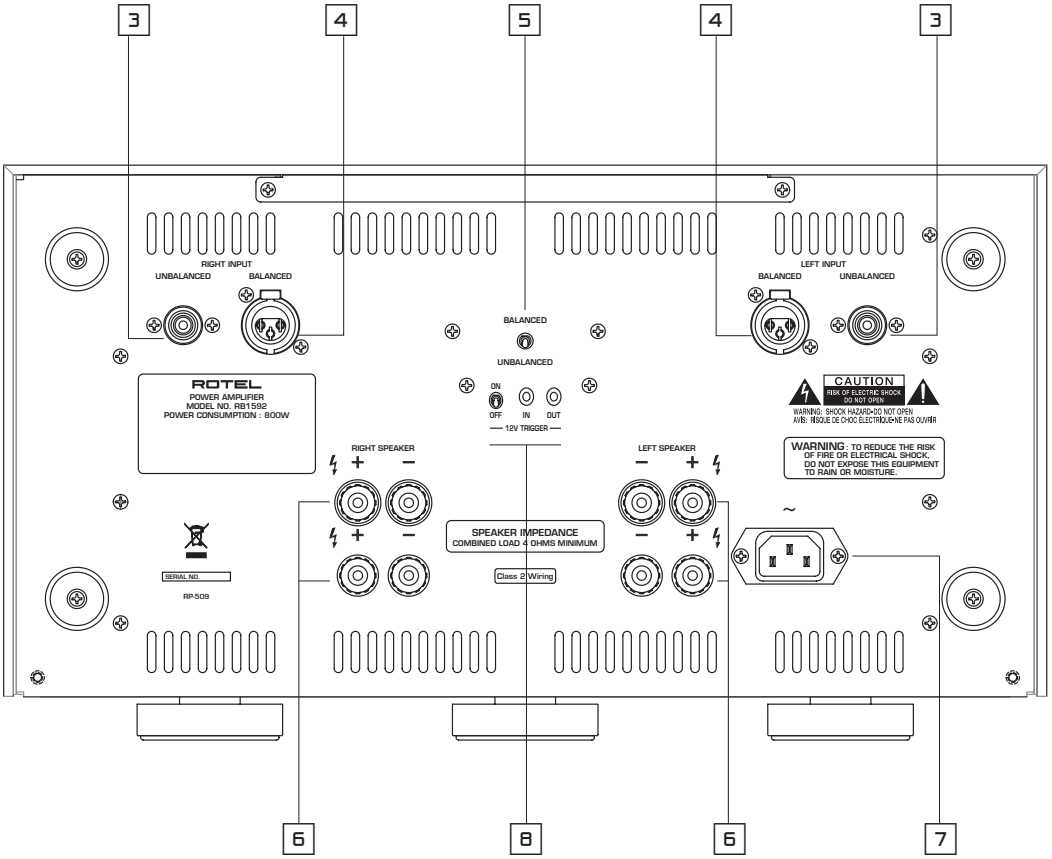
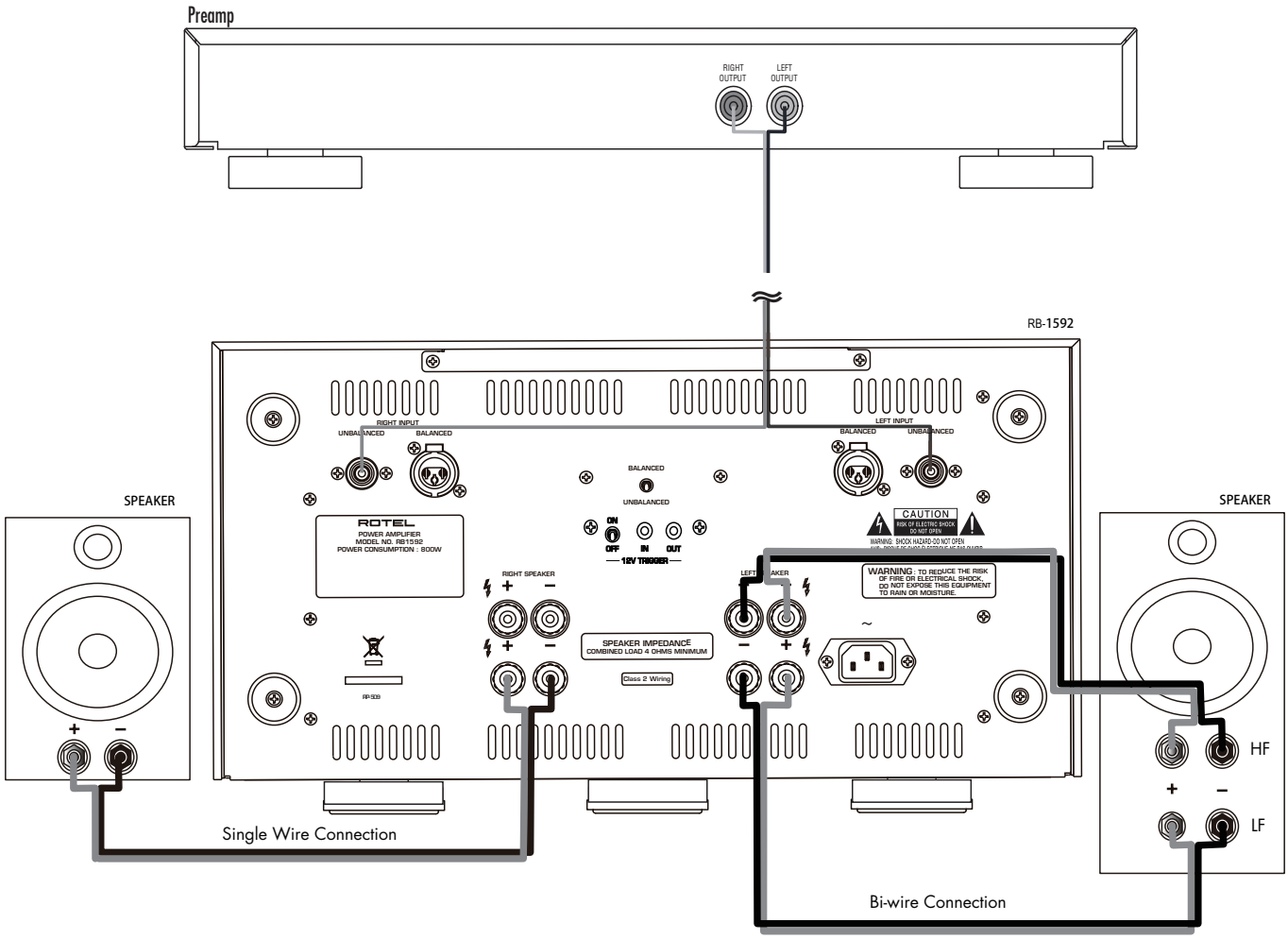


Figure 2: Hook-up Illustration



Important Notes

When making connections be sure to:

✔ Turn off **all** the components in the system **before** hooking up **any** components, including loudspeakers.

✔ Turn off **all** components in the system **before** changing **any** of the connections to the system.

It is also recommended that you:

✔ Turn the volume control of the amplifier all the way down **before** the amplifier is turned **on or off**.

Remarques importantes

Pendant les branchements, assurez-vous que :

✔ **Tous** les maillons sont éteints **avant** leur branchement, **quels qu'ils soient**, y compris les enceintes acoustiques.

✔ Éteignez **tous** les maillons **avant** de modifier **quoi que ce soit** au niveau de leurs branchements, quels qu'ils soient.

Il est également recommandé de :

✔ Toujours baissez le niveau sonore via le contrôle de volume, **avant d'allumer ou d'éteindre** l'amplificateur.

Wichtige Hinweise

Achten Sie beim Herstellen der Verbindungen auf Folgendes:

✔ Schalten Sie **alle** Komponenten im System ab, **bevor** Sie Geräte (einschließlich Lautsprecher) anschließen.

✔ Schalten Sie **alle** Komponenten im System ab, **bevor** Sie Anschlüsse im System verändern.

Ferner empfehlen wir, dass

✔ Sie die Lautstärke herunterdrehen, **bevor** Sie den Verstärker **ein-** oder **ab**schalten.

Notas Importantes

Cuando realice las conexiones, asegúrese de que:

✔ Desactiva **todos** los componentes del equipo, cajas acústicas incluidas, **antes** de conectar **cualquier nuevo componente** en el mismo.

✔ Desactiva **todos** los componentes del equipo **antes** de cambiar **cualquier conexión del mismo**.

También le recomendamos que:

✔ Reduzca el nivel de volumen de su amplificador a cero **antes** de **activarlo o desactivarlo**.

Héél belangrijk:

Bij het maken van de verbindingen:

✔ Zorg dat niet alleen de RB-1592, maar de **gehele** installatie uitstaat, als nog niet **alle** verbindingen gemaakt zijn.

✔ Zorg dat niet alleen de RB-1592, maar de **gehele** installatie ook uitstaat, **als** u verbindingen gaat **wijzigen**.

Wij raden u ook aan om

✔ de volumeregelaar van de voorversterker geheel dicht te draaien (volkomen naar links) **wanneer** u uw eindversterker **aan- of uitzet**.

Note importanti

Quando effettuate i collegamenti assicuratevi di:

✔ Spegnere **tutti** i componenti del sistema **prima** di collegare **qualsiasi** componente, inclusi i diffusori.

✔ Spegnere **tutti** i componenti del sistema **prima** di modificare **qualsiasi** connessione nel sistema.

Vi raccomandiamo inoltre di:

✔ Portare il volume a zero **prima** di **accendere o spegnere** l'amplificatore.

Viktigt

Tänk på följande när du gör anslutningar:

✔ Stäng av **alla** apparater i anläggningen **innan** du ansluter nya komponenter eller högtalare.

✔ Stäng av **alla** apparater i anläggningen **innan** du ändrar någon anslutning.

Du rekommenderas också:

✔ Vrida ner volymen på förförstärkaren helt och hållet **innan** förstärkaren slås **på eller av**.

Перед подсоединением:

✔ Выключите **все** компоненты, включая колонки.

✔ Выключите **все** компоненты в вашей системе, прежде чем что-то в ней **менять**.

Рекомендуется также:

✔ Вывести громкость усилителя на **минимум**, перед тем как **включать или выключать** его.

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About Rotel

Our story began 50 years ago. Over the decades, we have received hundreds of awards for our products and satisfied hundreds of thousands of people who take their entertainment seriously- like you!

Rotel was founded by a family whose passionate interest in music led them to manufacture high-fidelity components of uncompromising quality. Through the years, that passion has remained undiminished and the family goal of providing exceptional value for audiophiles and music lovers, regardless of their budget, is shared by all Rotel employees.

Rotel's engineers work as a close team, listening to, and fine tuning, each new product until it reaches their exacting musical standards. They are free to choose components from around the world in order to make that product the best they can. You are likely to find capacitors from the United Kingdom and Germany, semiconductors from Japan or the United States, while toroidal power transformers are manufactured in Rotel's own factory.

We all have concerns about our environment. And, as more and more electronics are produced and later discarded, it is especially important for a manufacturer to do all it can to engineer products that have a minimum negative impact on landfill sites and water tables.

At Rotel, we are proud to do our part. We have reduced the lead content in our electronics by using special ROHS solder, while our new Class D (not digital) amplifiers are up to five times more efficient than our legacy designs and still deliver power and performance. These products run cool, give minimum wasted energy, are good for the environment and give better sound too.

Finally, we have printed this brochure on recycled paper stock.

While we understand that these are small first steps, they are still important ones. And we continue to pursue new methods and materials for a cleaner and greener manufacturing process.

All of us at Rotel thank you for buying this product. We are sure it will bring you many years of enjoyment.

A Word About Watts

The RB-1592 power output is quoted as 380 watts for each channel, when both channels are operating together at full power.

Rotel has chosen to specify the power output in this way because, in Rotel's experience, it gives the truest value of the receiver or amplifier's power capability.

When comparing specifications for different products, you should be aware that power output is often specified in other ways, so you may not be comparing like with like.

For example, the power output may be quoted with only one channel operating, giving a higher maximum figure. The highly regulated power supplies of the Rotel amplifiers ensures that they will produce the full specified power output to one or all channels.

A loudspeaker's impedance rating indicates the electrical resistance or load it offers when connected to the amplifier, usually 8 ohms or 4 ohms. The lower the impedance, the more power the speaker will need. In effect, a 4 ohm speaker will require twice as much power as an 8 ohm speaker.

So ideally, the amplifier should be given double the power into a 4 ohm load – a rating of 400 watts into an 8 ohm load should become 800 watts into 4 ohms. Using lower impedance speakers makes greater demands on the amplifier's power supply, because it will be drawing more current and giving off more heat.

However, Rotel amplifiers are designed to work into any speaker impedance between 8 and 4 ohms, and with all the channels working up to their full power. Because the Rotel design is optimized for use with all channels operating together, Rotel is able to specify the true power output for all channels.

This can be important for your enjoyment, too. When watching movies, it's nice to have the amplifier able to reproduce full power into all the channels at the same time, especially in the case of a volcano exploding!.

Getting Started

Thank you for purchasing the Rotel RB-1592 Stereo Power Amplifier. When used in a high-quality music or home theater system, your Rotel amplifier will provide years of musical enjoyment.

The RB-1592 is a high-power, two channel power amplifier, providing the highest level of audio performance. A massive power supply, premium components, and Rotel's Balanced Design ensure superb sound quality. High current capability allows the RB-1592 to drive the most demanding loudspeakers.

Features

- Two channel power amplifier, with 380 watts per channel output into 8ohm.
- Large toroidal transformers designed and built by Rotel..
- Protection circuitry against fault conditions.
- Selectable balanced or unbalanced inputs.

A Few Precautions

Please read this manual carefully. In addition to basic installation and operating instructions, it provides valuable information on various RB-1592 system configurations as well as general information that will help you get optimum performance from your system. Please contact your authorized Rotel dealer for answers to any questions you might have. In addition, all of us at Rotel welcome your questions and comments

Save the RB-1592 shipping carton and all enclosed packing material for future use. Shipping or moving the RB-1592 in anything other than the original packing material may result in severe damage to your amplifier.

Fill out and send in the owner's registration card packed with the RB-1592. Also be sure to keep the original sales receipt. It is your best record of the date of purchase, which you will need in the event warranty service is ever required.

Placement

Place the RB-1592 on a solid, level surface away from sunlight, heat, moisture, or vibration.

Don't stack other components or objects on top of the RB-1592. Don't let any liquid fall into the unit.

Likewise, remember the weight of the amplifier when you select an installation location. Make sure that the shelf or cabinet can support its weight.

The RB-1592 generates heat during normal operation. Do not block ventilation openings. Allow a minimum of 10 cm or 4 inches of unobstructed space around the unit. If installed in a cabinet, make sure that there is adequate ventilation.

AC Power and Control

AC Power Input 7

Your RB-1592 is configured at the factory for the proper AC line voltage in the country where you purchased it (USA: 120 volts/60 Hz, Europe: 230 volts/50 Hz). The AC line configuration is noted on a label on the side panel. The RB-1592 must be connected to a polarized 3-pin wall outlet.

The RB-1592 is supplied with the proper AC power cord. Use only this cord or an exact equivalent. Do not modify the supplied cord. Do not use an extension cord.

Be sure the power switch on the front panel of the RB-1592 is turned off. Then, plug one end of the cord into the AC power connector on the back panel of the amplifier. Plug the other end into an appropriate AC outlet.

If you are going to be away from home for an extended period of time, it is a sensible precaution to unplug your amplifier.

Power Switch and Indicator Light 1

The power switch is located on the left side of the front panel. To turn the amplifier ON (or to activate the 12V trigger), push the switch in.

The indicator light around the switch will light, indicating that the amplifier is turned on. To turn the amplifier OFF, push the button again and return it to the out position.

Protection Indicator 2

A thermal protection circuit protects the amplifier against potential damage in the event of extreme or faulty operating conditions. Unlike many designs, the RB-1592's protection circuit is independent of the audio signal and has no impact on sonic performance. Instead, the protection circuit monitors the temperature of the output devices and shuts down the amplifier if temperatures exceed safe limits.

In addition, the RB-1592 includes overcurrent protection which operates only when load impedance drops too low.

Should a faulty condition arise, the amplifier will stop playing and the PROTECTION LED on the front panel will light. If this happens, turn the amplifier off, let it cool down for several minutes, and attempt to identify and correct the problem. When you turn the amplifier back on, the protection circuit will automatically reset and the PROTECTION LED should go out.

In most cases, the protection circuitry activates because of a fault condition such as shorted speaker wires, or inadequate ventilation causing an overheating condition. In very rare cases, highly reactive or extremely low impedance speaker loads could cause the protection circuit to engage.

12V Trigger On/Off Mode Selector 8

The RB-1592 provides different options for manual or automatic power on/off operation. These modes are selectable using a two position flip switch on the back panel as follows:

- **With the 12V Trigger switch in the OFF position,** the amplifier is turned on or off manually using the front panel power switch. Also use this mode if you are using a switched AC outlet to control power to the amplifier.
- **With the 12V Trigger switch in the ON position,** the amplifier is turned on automatically when a 12 volt trigger signal is present at the 12V TRIG input to the right of the switch. The amplifier goes into standby mode if the +12 volt signal is not present. The front panel POWER SWITCH overrides this function. It must be ON for the +12V trigger to work. Turning the switch

OFF cuts power to the amplifier, regardless of whether or not a trigger signal is present.

12V Trigger Input [8]

An input jack for connecting the wires carrying a +12 volt trigger signal from a Rotel preamp or surround sound processor to turn the amplifier on and off. To use this feature the adjacent flip switch must be set to the ON position (see previous section). The TRIGGER INPUT accepts any control signal (AC or DC) ranging from 3 volts to 30 volts. Use a cable with mono 3.5 mm mini-plugs on both ends. The +12V DC signal appears at the "tip" connector.

12V Trigger Output [8]

The 12V Trigger jack labeled OUT is used to pass the remote turn-on signal to a second Rotel amplifier. Any 12V Trigger signal at the INPUT jack will be passed through to the OUT jack.

Signal Connections

The RB-1592 provides two types of input connections — unbalanced RCA type connections as found on nearly all audio equipment as well as balanced XLR connections..

RCA Inputs [3]

See figure 2

There is one RCA input for each of the two amplifier channels. These RCA inputs accept audio signals from pre-amplifiers or surround sound processors. Use high quality audio interconnect cables for best performance.

XLR Inputs [4]

See figure 2

There is one XLR input for each of the two amplifier channels. These XLR inputs accept audio signals from preamplifiers or surround sound processors with XLR outputs.

Input Selector Switch [5]

A toggle switch in the middle of the RB-1592 rear panel selects the type of input signal to use. Select the correct inputs to use with this flip switch.

Note: To prevent loud, potentially damaging noises, make sure the amplifier is turned off when you make any singal connections..

Connect the left channel output of your preamp to the LEFT INPUT on the RB-1592. Connect the right channel of your preamp to the RIGHT INPUT.

Speakers

See Figure 2

The RB-1592 has four pairs of color coded binding posts, two for each channel. These connectors accept bare wire, connector lugs, or dual banana type connectors (except in the European Community countries where their use is not permitted).

Speaker Selection

The nominal impedance of the loudspeaker(s) connected to the RB-1592 should be a minimum of 4 ohms. When driving multiple pairs of speakers connected in parallel, the effective impedance the amplifier sees is cut in half. For example, when driving two pair of 8 ohm speakers, the amplifier sees a 4 ohm load. When driving multiple speakers in parallel, select speakers with a nominal impedance of 8 ohms or higher.

Speaker Wire Selection

Use insulated two-conductor stranded wire to connect the RB-1592 to the speakers. The size and quality of the wire can have an audible effect on the performance of the system. Standard speaker wire will work, but can result in lower output or diminished bass response, particularly over longer distances. In general, heavier wire will improve the sound. For best performance, you may want to consider special high-quality speaker cables. Your authorized Rotel dealer can help in the selection of cables for your system.

Polarity and Phasing

The polarity or positive/negative orientation of the connections for every speaker and amplifier connection must be consistent so all the speakers will be in phase. If the polarity of one connection is mistakenly reversed, bass output will be very weak and stereo imaging degraded. All wire is marked so you can identify the two conductors. There may be ribs or a stripe on the insulation of one conductor. The wire may have clear insulation with different color conductors (copper and silver). There may be polarity indications printed on the insulation. Identify the positive and negative conductors and be consistent with every speaker and amplifier connection.

Speaker Wire Connection [6]

See Figure 2

Route the wires from the RB-1592 to the speakers. Give yourself enough slack so you can move the components to allow access to the speaker connectors.

If you are using dual banana plugs, connect them to the wires and then plug into the backs of the binding posts. The binding posts should be screwed in all the way (clockwise).

If you are using terminal lugs, connect them to the wires. If you are attaching bare wires directly to the binding posts, separate the wire conductors and strip back the insulation from the end of each conductor. Be careful not to cut into the wire strands. Unscrew (turn counterclockwise) the binding post. Place the connector lug or wire around the binding post shaft. Turn the binding post clockwise to clamp the connector lug or wire firmly in place.

Troubleshooting

Most difficulties in audio systems are the result of poor or wrong connections, or improper control settings. If you encounter problems, isolate the area of the difficulty, check the control settings, determine the cause of the fault and make the necessary changes. If you are unable to get sound from the RB-1592, refer to the suggestions for the following conditions:

Power Indicator Is Not Lit

No main power to the RB-1592. Check AC power connections at the amplifier and the AC outlet. Check the front panel power switch. Make sure that it is set to the ON position.

No Sound

If the amp is getting AC power, but is producing no sound, check the PROTECTION INDICATOR on the front panel. If lit, see below. If not, check all of your connections and control settings on associated components.

Protection Indicator Is Lit

The front panel PROTECTION INDICATOR lights when the RB-1592 protection circuits have shut off the amplifier. Typically, this occurs only when the ventilation openings are blocked, when there is faulty speaker wiring, or after a period of extreme use. Turn off the system and wait for the amp to cool. Then push the front panel power switch in and out to reset the protection devices. If the problem is not corrected or reoccurs, there is a problem with the system or the amplifier itself.

Specifications

Continuous Power Output	
(20-20k Hz, <0.03%)	380 watts/ch into 8 ohms
	700 watts/ch into 4 ohms
Total Harmonic Distortion *(20Hz - 20kHz, 8 ohms)*	< 0.03%
Intermodulation Distortion *(60Hz:7kHz, 4:1)*	< 0.03%
Damping Factor *(20Hz-20kHz, 8ohms)*	1000
Input Impedance/Sensitivity	12 kohms/2.6 volts
Amplifier Gain	26.5dB
Frequency Response *(±1db)*	10Hz - 100Khz
S/N Ratio *(IHF A)*	125 dB
Crosstalk / Separation	> 70 dB
Speaker Impedance	4 ohms minimum
Power Requirements	USA: 120 volts, 60Hz
	Europe: 230 volts, 50Hz
Power Consumption	800 watts
	Idle: 70 watts
Standby	<0.5 watt
Dimensions *(W x H x D)*	431 x 237 x 410 mm
	17 x 9 3/8 x 16 1/8 in
Weight *(net)*	40 kgs, 88.18 lbs
Panel Height	5U/221mm/8 3/4 in

All specifications are accurate at the time of printing.
Rotel reserves the right to make improvements without notice.

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